

7 on behalf of the task; and
8 initializing the class by the task if the class is not already initialized,
9 wherein a null pointer stored at the initialized entry indicates that the class has not
10 initialized the task.

1 21. The computer-readable storage medium of claim 20, the method
2 further comprising:

3 upon completion of initialization of the class by the task, setting the
4 initialized entry of the task class mirror table associated with the class to the task
5 class mirror object that holds a representation of the class that is private to the
6 task; and

7 setting this task class mirror object to a fully initialized state.

1 22. The computer-readable storage medium of claim 21, wherein task
2 class mirror tables associated with classes that have a non-empty initialization
3 function includes one resolved entry per-task in addition to one initialized entry
4 per-task, for the plurality of tasks.

1 23. The computer-readable storage medium of claim 22, wherein task
2 class mirror tables associated with classes that have an empty initialization
3 function includes one resolved entry per-task in addition to an initialized entry
4 per-task, for the plurality of tasks.

1 24. The computer-readable storage medium of claim 23, the method
2 further comprising:
3 upon loading any class by the task, creating the task class mirror object
4 that holds the task private representation of the class;

5 setting the task class mirror object's state to loaded; and
6 assigning the task class mirror object's pointer to a resolved entry of the
7 task class mirror table associated with the class for that task.

1 25. The computer-readable storage medium of claim 24,
2 wherein the task class mirror table is arranged so that the resolved entry
3 and the initialized entry for the task are consecutive; and
4 wherein the byte-offset to the resolved entry can be computed from the
5 byte-offset to the initialized entry for a same task by adding a size, expressed in
6 number of bytes, of the pointer to the task class mirror object.

1 26. The computer-readable storage medium of claim 24,
2 wherein the task class mirror table is arranged so that the resolved entry
3 and the initialized entry for the task are separated by half of a total number of
4 entries in the task class mirror table; and
5 wherein the byte-offset to the resolved entry can be computed from the
6 byte-offset to the initialized entry for a same task by adding a size, expressed in
7 number of bytes, of half the total number of entries in the task class mirror table.

1 27. The computer-readable storage medium of claim 24, wherein the
2 resolved entry of the task class mirror table associated with the class is used in
3 cases where testing for class initialization is unneeded but access to a task-private
4 part of the class is required when the class has been loaded but not fully
5 initialized.

1 28. The computer-readable storage medium of claim 22,
2 wherein task class mirror tables associated with classes that have an empty

3 initialization function have a single entry per task; and
4 wherein the single entry per task is the initialized entry for that task.

1 29. The computer-readable storage medium of claim 28, the method
2 further comprising:

3 upon loading the class that has the non-empty initialization function by the
4 task, creating the task class mirror object that holds the task private representation
5 of the class;

6 setting the task class mirror object's state to loaded; and

7 assigning the task class mirror object's pointer to a resolved entry of the
8 task class mirror table associated with the class for that task.

1 30. The computer-readable storage medium of claim 29,
2 wherein the task class mirror table is arranged so that the resolved entry
3 and the initialized entry for the task are separated by half of a total number of
4 entries in the task class mirror table; and

5 wherein the byte-offset to the resolved entry can be computed from the
6 byte-offset to the initialized entry for a same task by adding a size, expressed in
7 number of bytes, of half the total number of entries in the task class mirror table.

1 31. The computer-readable storage medium of claim 30, wherein the
2 resolved entry of task class mirror tables associated with classes that have the non-
3 empty initialization function is used when accessing a task-private part of the
4 class without testing for class initialization is necessary and the task has loaded
5 but not fully initialized the class.

1 32. The computer-readable storage medium of claim 28, the method